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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
U02-0003.16

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Application Number	Filed
10/065,413	October 16, 2002
First Named Inventor	
William O. Camp Jr.	
Art Unit	Examiner
2617	Willie J. Daniel Jr.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.7.1. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 37,911.

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34_____

Signature

Steven B. Phillips
Typed or printed name

919-286-8000
Telephone number

April 16, 2007
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed applicable form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	William O. Camp Jr.	)
Serial No.:	10/065,413	) Confirmation No. 6740
Filing Date:	October 16, 2002	)
Examiner:	Willie J. Daniel, Jr.	)
Art Unit:	2617	)
Attorney Docket:	U02-0003.16	)
Title:	MOBILE TERMINAL IMPLEMENTING A RANGING SIGNAL RECEIVER AND METHOD	)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REMARKS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant submits that the current and preceding office actions issued by the Examiner in the present application contain clear errors in the Examiner's rejections as well as omissions of one or more essential elements needed for a *prima facie* rejection under 35 U.S.C. § 103.

The present invention is related to incorporating ranging signal reception capability into a mobile terminal, wherein the signals to be used for ranging have a bandwidth that is much wider than the filters in the receiving system. In particular, the ranging signals considered are digital television signals, and digital television synchronization bursts are used for ranging to aid in determining the position of the mobile terminal. The present invention is directed to a system that allows a common filter to be used for both radiotelephone signals and these digital television ranging signals, notwithstanding the filter being too narrow in bandwidth to allow demodulation of the digital television signals. Thus, the need for completely independent receiving systems to be included in a device intended to receive both types of signals is alleviated, where the DTV signal is to be used for ranging only.

The Examiner continues to reject claims 1, 2, 4-7, 10, 11, 13, and 14, as amended, under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent 6,717,547 to Spilker et al. ("Spilker") in combination with U.S. Patent 6,522,297 to Rabinowitz et al. ("Rabinowitz). However, there are recitations in all of Applicant's independent claims, and thus in all of Applicant's claims through

dependency, which are not fairly taught or suggested by Spilker and Rabinowitz. Applicant's claims 1, 10, and 13 all include a recitation of "a filter...shared in common with both" a radio subsystem and either a ranging signal receiving subsystem or the means for receiving a DTV signal. The Examiner has cited col. 14, lines 34-45 and elements 812A and B from the figures of Spilker, where an ordinary IF filter is shown. The ranging subsystem presented in Spilker that uses the IF filter to which the Examiner refers uses GSM signals, not DTV signals, and its bandwidth is appropriate to allow demodulation of GSM signals. Spilker does not discuss or show any common components at all, much less a common, shared filter as claimed by Applicant connected to two subsystems. In fact, Spilker does not describe any details of the components that might be used for the DTV subsystem. The detailed block diagram of Fig. 8, on which the Examiner repeatedly relies, shows only a system that receives ordinary GSM telephone signals and ranges using only these GSM signals. Spilker may mention that the mobile terminal can include DTV capability, but this capability is not described or shown in detail anywhere in Spilker, much less in Fig. 8, and there is no discussion of using common components for this capability, or accounting for the narrow bandwidth of the IF filter relative to DTV signals. It is axiomatic that every claim recitation must be shown in at least one of the cited references for a rejection under Section 103 to stand. *See* M.P.E.P. 2143.03. The Examiner's position is that the filter shared in common between these two subsystems is shown in Spilker, but there is no such teaching in Spilker.

The Examiner has emphasized the fact that in the specification, Applicant has mentioned that the shared in common filter could be an intermediate frequency (IF) filter. The fact that Applicant' claimed filter could be an IF filter has no bearing whatsoever on the present issue. If an IF filter were used for Applicant's claimed filter, it would have to be an IF filter that is "shared in common with both [a] radio subsystem and [a] ranging signal receiving subsystem" as claimed by Applicant in order to fall within the recitations of Applicant's claims. Being an IF filter and being a "shared in common" filter are independent filter characteristics. One does not necessarily lead to the other. Yet the Examiner concludes that because Applicant has mentioned that the shared in common filter *could also* be an IF filter, every previous IF filter teaches Applicant's shared in common filter. This reasoning makes no sense, ether from a grammatical or technical perspective.

In addition to the recitation discussed above, Applicant's independent claims 1, 10, and 13 all recite "correlating the DTV signal with a known sequence that has been predistorted." The Examiner points to specific discussions in Rabinowitz as disclosing this recitation of Applicant's claims, citing: col. 6, lines 43-52; col. 11, lines 10-24 and lines 49-53; col. 11, line 58 - col. 12, line 9; col. 12, line 60 - col. 13, line 3; col. 14, lines 13-34; and Figures 4, 13, and 15 of Rabinowitz. Applicant has examined these sections of Rabinowitz and can find no mention of predistortion or the use of a predistorted sequence as recited in Applicant's claims. These sections of Rabinowitz appear to be nothing more than random selections from a cited reference, where some terminology from these selections is similar to some of the terminology of Applicant's claims.

Rabinowitz is directed to using analog television signals and the receiving system in Rabinowitz appears to be used within its bandwidth-appropriate reception capability for receiving these signals. Applicant's claimed invention, by contrast, is directed to using a receiving system for which actual demodulation and direct use of the targeted ranging signal is impossible due to bandwidth constraints relative to the targeting ranging signal. This "misuse" of the system can be done in such a way so that ranging is still possible through the use of Applicant's predistorted sequence. This recitation regarding the use of a predistorted sequence, which is in all of Applicant's claims either directly, or through dependency, is missing from, and not suggested by the cited art, alone or in combination. Applicant's claims are patentable over Spilker and Rabinowitz for this additional reason.

Much of the art cited by the Examiner shows or suggests devices or apparatus in which telecommunication signaling function and ranging signal reception are carried out by separate subsystems within a device. The very disparate bandwidth requirement of the two types of signals being used in the device as disclosed and claimed by Applicant makes filter design difficult. Thus the use of a shared-in-common filter as disclosed and claimed by Applicant is not suggested by the art, even combined. Applicant has arrived at an elegant solution to this problem, namely, the use of a pre-distorted sequence. The Examiner has failed in his burden to show that the art combined suggests to one of ordinary skill in the art a shared filter which makes use of a pre-distorted sequence to compensate for the fact that such a filter would not be of the proper bandwidth for a DTV signal.

Spilker and Rabinowitz are also not properly combinable in this instance. Taking the filter disclosed in Rabinowitz or Spilker and making it a common filter without making further modifications would not work. The Spilker filter is too narrow for a DTV signal. Likewise, the filter of Rabinowitz does not have the proper bandwidth for GSM signals. Thus the combination would render one reference or the other unsatisfactory for its intended purpose, meaning by definition, that there is no motivation or suggestion for the combination. MPEP § 2143.01

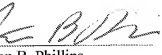
Since the independent claims are patentable over Spilker and Rabinowitz, then the claims that depend from them are patentable for at least those same reasons. However, neither Spilker nor Rabinowitz discuss or show any components such as a mixer or amplifier are shared between two receiving subsystems. Thus, the combination of these references cannot show such components. Therefore, claims 4-7 are patentable for at least this additional reason.

The Examiner continues to reject claims 3, 8-9, 12, and 15 as obvious under 35 U.S.C. § 103(a) in view of Spilker in combination with Rabinowitz, further in combination with U.S. published patent application 2002/0144294. Again, claims 8 and 9 each recite a shared mixer or a shared mixer in combination with a shared amplifier. None of these three references discusses or shows any such components that are shared between two receiving subsystems. Thus, the combination of these references cannot show such components.

As the Examiner's rejections have been shown to be in clear error and lack essential elements of a *prima facie* Section 103 rejection, Applicant requests that these claims be allowed to issue.

Respectfully submitted,

Date: 16 April 07



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